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HRSD boss and guests gulp glasses filled with a liquid formerly known as sewage

- By Dave Mayfield
  The Virginian-Pilot
-

Ted Henifin, general manager for HRSD, takes a drink of what was once waste water at HRSD's SWIFT (Sustainable Water Initiative for Tomorrow) pilot plant in Seaford, Va. on Thursday, Sept. 15, 2016. At the plant waste water is treated to the point where it is drinkable. HRSD plans to pump the treated water into the main aquifer underlying southeastern Virginia.

YORK COUNTY

Earlier this year, as the Hampton Roads Sanitation District ramped up plans to make its wastewater clean enough to drink, general manager Ted Henifin vowed he'd take the first gulp.

On Thursday at the HRSD's York County treatment plant, Henifin made good on the promise, leading dozens of employees and invited guests in downing glasses of water that came from a sewage stream fed by sinks and toilets.

"Great!" he proclaimed after his first sip. "Ahhh."

To Henifin, it was no mere stunt. It was an early demonstration of the potential for an ambitious initiative to turn what goes down Hampton Roads' drains into a resource that could help fight sea level rise.

The HRSD's plan is to eventually treat as much as 120 million gallons a day to drinking-water standards, then inject it into the Potomac aquifer, the main groundwater source for coastal Virginia.

The project's backers, including Gov. Terry McAuliffe, are hoping it will slow the sinking of land throughout the region. That subsidence has been blamed on wells sucking too much water from the aquifer, and geologists say it accounts for more than half of Hampton Roads' relative sea level rise over the past century.

The HRSD first has to prove that it can turn sewage into water that's clean enough to put into the aquifer. It began pilot-testing drinking-water treatment options at its York plant in June.

Henifin said the Virginia Department of Health gave the treated water an "OK" to drink on Wednesday, but the two systems there are producing only 35 gallons per minute combined.

The next step will be a demonstration project at the HRSD's Nansemond plant in northern Suffolk, where it aims to crank out 20 times that rate – about 1 million gallons a day. If it pulls that off, the agency then plans within the next few years to begin injecting the water through a well at the plant.

By 2030, the HRSD hopes to be pumping water underground at seven of its treatment facilities.

Total estimated cost of the project: $1 billion.

Robert Burnley, former director of the Virginia Department of Environmental Quality, said at Thursday's ceremony that he's been involved in water resource issues for more than 40 years, and, "I've never seen a bolder, more creative, more courageous project than this one."

There are other potential benefits.

The recharging of the aquifer could head off what otherwise might eventually be drastic limits on groundwater withdrawals while providing sources of water for new industries. And with discharges of treated, but still polluted, wastewater into local rivers all but eliminated, the region's cities and counties could leap into compliance with the federal Chesapeake Bay cleanup mandate and avoid hundreds of millions of dollars in cleanup costs.

With so much potential, Burnley asked the crowd of about 100 people, "Can we all resolve today to stop calling it wastewater? It's a really precious resource. … Perhaps if we stopped thinking and talking about it in pejorative terms, we might find it easier to embrace its value."

Henifin said a few times on Thursday that even he has wondered whether the HRSD was on to something "too good to be true."

He said that the agency wants more public comment and suggestions, and will hold forums and open houses as well as set up a public viewing stage at the Nansemond plant. To vet the science behind the project, he said, the HRSD has gone through the National Water Research Institute to convene an "independent review panel" of experts. It will be led by Glen Daigger, a professor of engineering practice at the University of Michigan.

Henifin said one of the reasons why the HRSD is pursuing the project is increasing concern among federal health regulators about concentrations of prescription drugs in wastewater.

Anticipating that treatment authorities will be required to install technologies to remove more pharmaceuticals from effluent, HRSD officials came to the conclusion that they eventually would have to meet drinking-water standards anyway. Better to get ahead of the requirement than react to it, Henifin said.

Daigger, who has made a career of studying water treatment, said he had no concerns about drinking what the HRSD offered Thursday. Because it's using a variety of processes that go well beyond the norm for drinking-water plants, "it actually is of better quality" than what comes out of most taps, he said.

Molly Ward, Virginia's secretary of natural resources, was the first to follow Henifin at the hand pump where he cranked out glassfuls.

She pronounced her sample "delicious" and said it tasted like bottled water.

Ward, a former Hampton mayor, first met Henifin when he was the city's public works director.

She called him an innovator then and now, and said the McAuliffe administration and state lawmakers from both parties are "uniformly excited" about the HRSD initiative.

"The opportunities for restoring the aquifer, for managing our groundwater usage, for the health of the bay, for possibly reducing and/or reversing subsidence, the opportunity for future economic development all make it a very promising project," Ward said.

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